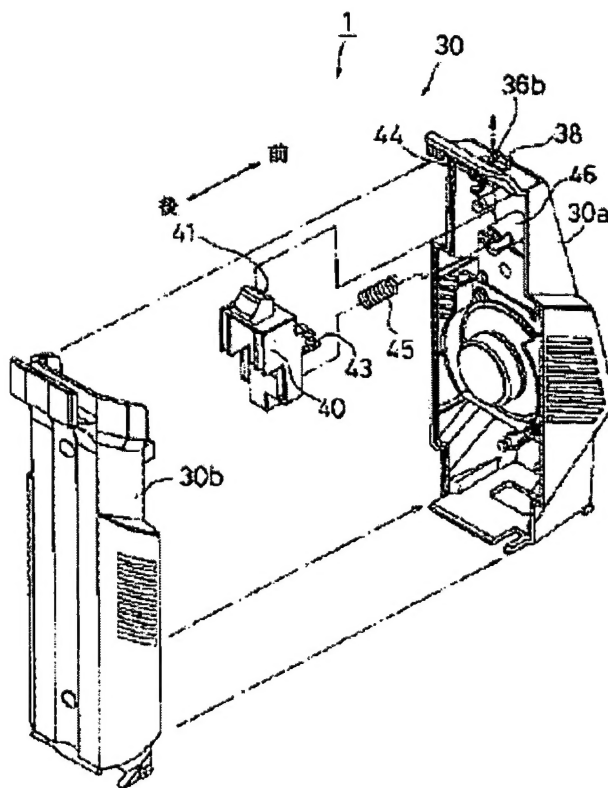


**TELEPHONE SET****Publication number:** JP2002354091**Publication date:** 2002-12-06**Inventor:** SATO TAKASHI; AIKAWA MASATOSHI**Applicant:** MATSUSHITA ELECTRIC IND CO LTD**Classification:****- international:** *H04M1/04; H04M1/06; H04M1/04;* (IPC1-7): H04M1/04;  
H04M1/06**- European:****Application number:** JP20010152645 20010522**Priority number(s):** JP20010152645 20010522

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**Abstract of JP2002354091**

**PROBLEM TO BE SOLVED:** To obtain a telephone which facilitates assembling work and allows a hook plunger to push in a phone main body surely when placed a handset on the phone main body. **SOLUTION:** A supporting axis 43 of an oscillatable hook plunger 40 is formed to have width across flat, also a bearing of a locking part 44 which supports the hook plunger 40 is connected between an axial hole and the axial hole and an insert groove having a groove width which is made nearly equal to the width across flat of the supporting axis 43 are provided. A protruding portion 41 of the hook plunger 40 is provided with two sides step-shaped which can thrust by abutting against a different region of a handset.



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CLAIMS

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[Claim(s)]

[Claim 1] In the telephone which arranges the hand set with which the transmitter/receiver part was formed at least every length It has the hook plunger which spring energization is carried out [ plunger ] and makes the height at a tip project to a case outside surface while while forms the body of telephone and being supported free [ rocking ] focusing on a pivot with coalesce of a case and the case of another side, and the case of said pair. Bearing is formed in an insertion slot with the flute width which the pivot of said hook plunger is formed so that it may have a width across flat, the stop section which supports said hook plunger is open for free passage to a boss and this boss, and carries out abbreviation coincidence with the width across flat of said pivot. Telephone characterized by carrying out temporary maintenance at one [ said ] case or the case of another side by carrying out spring energization so that said hook plunger may make said boss insert said pivot from said insertion slot in front of case coalesce and the height at said tip may project from a case outside surface.

[Claim 2] Telephone according to claim 1 characterized by having approached the hook pawl of the hand-set receptacle which stops said hand set, having projected and forming the height at the tip of said hook plunger.

[Claim 3] Telephone according to claim 2 characterized by forming said height in the level difference configuration where the second page which the lower part apical surface or jaw of the perimeter of the receiver section of said hand set contacts was equipped.

[Claim 4] Telephone according to claim 3 characterized by resisting the spring energization force and pressing this height in contact with said height if said hand set moves from the horizontal or perpendicular direction of said body of telephone and said hand-set receptacle is stopped.

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DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the telephone which arranges the hand set with which the transmitter/receiver part was formed every length in more detail about telephone.

[0002]

[Description of the Prior Art] A hand set 62 is covered over the body 61 of telephone, and the telephone 60 of the conventional table top type is depressing the height 64 of the hook plunger 63 in the body 61 of telephone with the hand set 62, as shown in drawing 10.

[0003] And when a hand set 62 is removed from the body 61 of telephone, the hook plunger 63 rotates focusing on a pivot 66 by the spring energization force of a spring 65, and makes a height 64 project from the body 61 of telephone. At this time, telephone 60 is changed to a talk state by interrupting the optical path of photosensor (not shown) with the protruding piece 67 of the hook plunger 63.

[0004] By the built telephone 60, as shown in drawing 11, the body 61 of telephone makes upper case 61a and bottom case 61b coalesce, and is assembled. And in order to build the hook plunger 63 into the body 61 of telephone, the vertical cases 61a and 61b are made to coalesce, maintaining at the condition of having arranged the spring 65 between upper case 61a and the hook plunger 63, and fastening support of the pivot 66 of the hook plunger 63 is carried out by the bearing 68 of upper case 61a, and the axial attaching part 69 of bottom case 61b. Thereby, telephone 60 is assembled by the condition of drawing 10.

[0005]

[Problem(s) to be Solved by the Invention] However, since the spring 65 was arranged between upper case 61a and the hook plunger 63 at the time of assembly operation as described above, and the spring energization force acted on the hook plunger 63 and it was made to make the hook plunger 63 jump out of bearing 68, it was hard to do a coalesce activity with upper case 61a and bottom case 61b.

[0006] On the other hand, when a hand set 2 was covered over a hand-set receptacle and a hand set 2 was put on the halfway condition of having shifted from the location of normal, the hook plunger 63 might be unable to be depressed in the body 61 of telephone. For this reason, the situation where a communication line does not go out may be produced.

[0007] When this invention was made based on the above-mentioned actual condition, and attachment of a hook plunger of it is completed easily, and it can improve assembly-operation nature and a hand set is covered over a hand-set receptacle, even if it is in a halfway stop condition, it will aim at offering the telephone which pushes in a hook plunger in the body of telephone, and can cut a communication line certainly.

[0008]

[Means for Solving the Problem] The telephone built over this invention in order to attain the above-mentioned purpose In the telephone which arranges the hand set with which the transmitter/receiver part was formed at least every length It has the hook plunger which spring energization is carried out [ plunger ] and makes the height at a tip project to a case outside surface while while forms the body of telephone and being supported free [ rocking ] focusing on a pivot with coalesce of a case and the case of another side, and the case of said pair. Bearing is formed in an insertion slot with the flute

width which the pivot of said hook plunger is formed so that it may have a width across flat, the stop section which supports said hook plunger is open for free passage to a boss and this boss, and carries out abbreviation coincidence with the width across flat of said pivot. It is characterized by carrying out temporary maintenance at one [ said ] case or the case of another side by carrying out spring energization so that said hook plunger may make said boss insert said pivot from said insertion slot in front of case coalesce and the height at said tip may project from a case outside surface.

[0009] By this telephone, since the pivot of a hook plunger has a width across flat, has the flute width in which the insertion slot on the bearing carries out abbreviation coincidence with the width across flat of a pivot and is formed, a pivot is stopped by the boss from a boss at ejection impossible by carrying out spring energization of the hook plunger after inserting in a boss for a pivot from an insertion slot, and rotating a pivot. Therefore, even if it is not pressing down by hand the hook plunger by which spring energization was carried out, temporary maintenance can be carried out at a case and assembly-operation effectiveness can be improved.

[0010] Moreover, the telephone concerning this invention is characterized by having approached the hook pawl of the hand-set receptacle which stops said hand set, having projected and forming the height at the tip of said hook plunger.

[0011] By this telephone, since contiguity arrangement is carried out at the hook pawl of the hand-set receptacle which stops a hand set for the height of a hook plunger, when a hand set is covered over a hook pawl, contact of a hand set can be made easy and a hook plunger can be certainly pushed in in the body of telephone with the telephone which has arranged especially the hand set every length.

[0012] Moreover, the telephone concerning this invention is characterized by forming said height in the level difference configuration where the second page which the lower part apical surface or jaw of the perimeter of the receiver section of said hand set contacts was equipped.

[0013] By this telephone, since the height of a hook plunger was formed in the level difference configuration which the part where hand sets differ hits, when a hand set is made to contact a hook plunger, a height can be pressed in respect of either of the hand sets.

[0014] Moreover, if said hand set moves from the horizontal or perpendicular direction of said body of telephone and said hand-set receptacle is made to stop the telephone concerning this invention, it is characterized by resisting the spring energization force and pressing this height in contact with said height.

[0015] By this telephone, since the height of a hook plunger is made to press a hand set even if it is level or the case where a hand-set receptacle is stopped from which direction of vertical of the body of telephone, a hook plunger is always pushed in in the body of telephone.

[0016]

[Embodiment of the Invention] Hereafter, the gestalt of suitable operation of the telephone concerning this invention is explained in full detail based on a drawing. The decomposition perspective view showing the gestalt of 1 operation of the telephone which drawing 1 requires for this invention, the decomposition perspective view of a stand [ in / in drawing 2 / the telephone of drawing 1 ], Drawing 3 shows the important section of the hand-set receptacle of the stand of drawing 2 . A spring The sectional view of a compression condition, Drawing 4 shows the A section enlarged drawing of drawing 3 , and drawing 5 shows the important section of the hand-set receptacle of the stand of drawing 2 . The condition of having removed the hand set of the telephone which the sectional view in the condition that spring compression was canceled, and drawing 6 require for the B section sectional view of drawing 5 , and drawing 7 requires for this invention a part A sectional view, a part of condition that drawing 8 made the hand-set receptacle stop the hand set of the telephone concerning this invention -- a part of condition that a sectional view and drawing 9 made the hand-set receptacle stop the hand set of the telephone concerning this invention halfway - - it is a sectional view. In addition, the gestalt of this operation explains the new type which arranges a hand set every length to the body of telephone as telephone.

[0017] The telephone 1 of the gestalt of this operation is equipped with the hand set 2 with which transmission section 2a and receiver section 2b were formed, and the body 10 which arranges this hand set 2 every length as shown in drawing 1 . A body 10 serves as the base section 11 in which push button control unit 11a and monitor section 12b were formed from the stand 30 attached to the

base section 11 in one in order to support a hand set 2 longitudinally. In addition, the non-illustrated communication circuit substrate is held in the base section 11.

[0018] The base section 11 is the gestalt in which the rear face 14 of the downhill grade which is a predetermined tilt angle and followed backside [ a peripheral wall 12 ] upper limit in the actuation side 13 was formed while going up to before [ a peripheral wall 12 ] side upper limit by the predetermined tilt angle and forming the actuation side 13 of inclination. The actuation side 13 was made into the rectangle-like flat surface, and has equipped push button control unit 11a formed ranging from lower limit section 13a to a center section, and monitor section 12b formed in upper limit section 13b.

[0019] The stand fitting section 15 which became depressed in the concave is formed in a rear face 14, and the base 16 of the stand fitting section 15 is made horizontally. In order to make the workability with a group of a stand 30 good, the spigot hole which is not illustrated for inserting the stop pawl 33 of the stand 30 mentioned later is \*\*\*\*(ed) by this base 16. That is, temporary maintenance of the stand 30 is carried out at the stand fitting section 15 by inserting the pars basilaris ossis occipitalis 31 of a stand 30 in the stand fitting section 15, and inserting in a spigot hole the stop pawl 33 of the pair projected and formed in the front end edge of a pars basilaris ossis occipitalis 31.

[0020] The modular jack which is not illustrated for connecting connection terminal 6a of the hand-set code 6 is formed in the bottom plate of the base section 11, and the hand-set code 6 linked to this modular jack is pulled out from the through-hole 22 of the lower part of a peripheral wall 12.

Moreover, near the back end of the bottom plate of the base section 11, the modular jack which is not illustrated for connecting connection terminal 25a of the modular code 25 is formed, and the modular code 25 is pulled out from the backside [ the base section 11 ]. In addition, the hand-set code 6 connects a hand set 2 and the base section 11, and the modular code 25 connects the base section 11 and a non-illustrated external modular jack.

[0021] A stand 30 is set up at a predetermined include angle to the actuation side 13 of push button control unit 11a, and is arranged in the abbreviation center section of the base section 11 in \*\*\*\*\*. From the stand fitting section 15, a stand 30 can be formed small a little and can fit into the stand fitting section 15 while the pars basilaris ossis occipitalis 31 which makes one case (front case) 30a and case (rear-face case) 30b of another side come to coalesce is formed in the shape of an abbreviation rectangle object. As mentioned already, the stop pawl 33 of a pair projects and is formed in the front end of this pars basilaris ossis occipitalis 31.

[0022] Furthermore, the accession department 35 for becoming depressed in the front lower part part of a stand 30 in the shape of cross-section \*\*\*\*, and accepting transmission section 2a of a hand set 2 in it is formed, and the corner 36 for carrying jaw 2e of receiver section 2b is projected and formed in the front upper part of a stand 30.

[0023] It inserts into 2g (refer to drawing 7 ) of stop holes of a hand set 2, and while the hook pawl 38 on which a hand set 2 is made to hang projects and is formed, the height 41 at the tip of the hook plunger 40 projected from opening 36b close to the hook pawl 38 is formed in top-face 36a of this corner 36 free [ frequent appearance ]. And a height 41 is pushed in in a stand 30 by making top-face 36a of this corner 36 support receiver section 2b.

[0024] the installation condition of a hand set 2 which forms a level difference configuration in a height 41 as shown in drawing 3 and drawing 5 that page [ second ] 41a and 41b are equipped, and these fields 41a and 41b are supported by corner 36 top-face 36a -- how -- it is pressed by contact of the part where hand sets 2 differ even if it is a case.

[0025] A hand set 2 is the configuration that the tooth-back covering 3 was formed in the shape of an abbreviation rectangle, transmission section 2a was formed in the lower limit section 4, and receiver section 2b was formed in the upper limit section 5, respectively. The MOJURA jacks 7a and 7b whose connection of connection terminal 6b of the hand-set code 6 was enabled at the left and right laterals 2c and 2d of transmission section 2a are attached downward with the predetermined tilt angle (for example, 45 degrees), respectively.

[0026] When this tilt angle makes a stand 30 support a hand set 2, the hand-set code 6 linked to the MOJURA jacks 7a and 7b is set up in order to avoid interference with the base section 11. Moreover, since the MOJURA jacks 7a and 7b are formed in left and right laterals 2c and 2d, the hand-set code 6 chooses a right-and-left [ one of ] side alternatively according to the use part of telephone 1, and



can connect it.

[0027] As shown in drawing 2, a stand 30 is coalescing and supports front case 30a and rear-face case 30b for the hook plunger 40, enabling free rocking. Protrusion formation of the stop section 44 for supporting the hook plunger 40, enabling free rocking and the cylinder-like spring attaching part 46 is carried out at the internal surface of front case 30a of a stand 30.

[0028] The spring attaching part 46 carries out insertion maintenance of the spring 45, and as shown in drawing 1, this spring 45 carries out spring energization of the height 41 of the hook plunger 40, and enables frequent appearance of a height 41 to a case outside surface from opening 36b. And the bearing of the stop section 44 which mentions the pivot 43 of the hook plunger 40 later is made to support a stand 30, and after changing into the condition of having carried out spring energization with the spring 45 which inserted the hook plunger 40 in the spring attaching part 46, it is assembled with coalesce with front case 30a and rear-face case 30b.

[0029] As shown in drawing 4, the hook plunger 40 has the width across flat W1 to which the pivot 43 carried out opposite arrangement of the flat sides 43a and 43a of a pair, and is formed. On the other hand, bearing is formed of insertion slot 44b of the flute width W2 (detailed, slightly larger width of face than a width across flat W1) which the stop section 44 which supports the hook plunger 40 is open for free passage to boss 44a and this boss 44a, and carries out abbreviation coincidence with the width across flat W1 of a pivot 43.

[0030] Therefore, a pivot 43 can be inserted in boss 44a by changing into the condition of having maintained the posture of the hook plunger 40 so that the flat sides 43a and 43a might counter with the wall surface of insertion slot 44b, and inserting in insertion slot 44b. In addition, where the posture of the hook plunger 40 is maintained, as shown in drawing 3, the compression set of the spring 45 is carried out so that a pivot 43 can insert in insertion slot 44b.

[0031] If the compression set of a spring 45 is canceled and the hook plunger 40 is rotated as shown in drawing 5 after inserting a pivot 43 in boss 44a, the height 41 at the tip of the hook plunger 40 projects from opening 36b of a stand 30 to a case outside surface.

[0032] Moreover, when the hook plunger 40 rotates, as shown in drawing 6, a pivot 43 is rotated so that insertion slot 44b and the flat sides 43a and 43a which countered may separate from insertion slot 44b. Thereby, a shaft diameter with larger \*\*\*\*\* 43 than the flute width W2 of insertion slot 44b is located in the free passage section with insertion slot 44b, and ejection from boss 44a is made into impossible.

[0033] Therefore, even if it does not support the hook plunger 40 by hand, it is changed into the condition of having made the pivot 43 inserting in boss 44a, and temporary maintenance is carried out at the front case 30a side. Therefore, rear-face case 30b can be put and cases can be made to coalesce at the time of the assembly of a stand 30, where temporary maintenance of the hook plunger 40 is carried out at front case 30a.

[0034] As shown in drawing 1, after it inserts the stop pawl 33 formed in the pars basilaris ossis occipitalis 31 in the spigot hole which is not illustrated [ which was formed in the stand fitting section 15 ] and it carries out temporary maintenance at the base section 11, a stand 30 fixes in the base section 11, and is attached in one. And telephone 1 connects the base section 11 and a hand set 2 in hand-set code 6, and is assembled.

[0035] If one is equipped with a stand 30, as shown in drawing 7, the corner 36 which supports a hand set 2 will project in the front upper part of a stand 30, and telephone 1 will be formed. And while the hook pawl 38 which hangs a hand set 2 projects, this hook pawl 38 is approached and the height 41 of the hook plunger 40 protrudes on top-face 36a of a corner 36 possible [ frequent appearance ].

[0036] Although certainly supported by the hand set 2 to a stand 30 by hanging 2g of stop holes of a hand set 2 on the hook pawl 38 as the telephone 1 by the above configuration shows to drawing 8, since contiguity arrangement of the height 41 of the hook plunger 40 is carried out at the hook pawl 38 in this case, as for a hand set 2, the contact to a height 41 is easily made irrespective of that installation condition, a height 41 is pushed in in a stand 30, and it can do.

[0037] In addition, since the height 41 is formed in the level difference configuration where the second page which 2f of lower part apical surfaces around [ receiver section 2b ] a hand set 2 and jaw 2e contact was equipped As shown in drawing 9, even when a hand set 2 is put on a hand-set

receptacle in the halfway condition of not inserting the hook pawl 38 in 2g of spigot holes completely. For example, a height 41 can be pressed, when jaw 2e of a hand set 2 contacts the 1st page 41a or 2f of lower part apical surfaces around [ receiver section 2b ] a hand set 2 contacts the 2nd page 41b. That is, a hand set 2 can press a height 41 in respect of the either, and can always cut a line of contact certainly.

[0038] Thus, since the height 41 has equipped the second page of a level difference configuration, when a hand set 2 is covered over a hand-set receptacle, a hand set 2 can contact one field of the heights 41, and can push in the hook plunger 40 in a stand 30.

[0039] Moreover, as shown in drawing 7, even if a hand set 2 is the case where a hand-set receptacle is stopped from the horizontal direction (the direction of arrow-head a) of the body 10 of telephone, or which direction of vertical (the direction of arrow-head b), it can push in the hook plunger 40 in a stand 30 in contact with the height 41 equipped with the second page of a level difference configuration.

[0040] Therefore, even if it makes the hook pawl 38 for hand-set receptacles stop the hand set 2 of a stand 30 from the which direction of horizontal or a perpendicular direction, the height 41 of the hook plunger 40 can be pressed with a hand set 2. For this reason, when a hand set 2 is covered over the hook pawl 38, the hook plunger 40 can be certainly pushed in in a stand 30 with a hand set 2.

[0041] since it constituted as a new type which arranges a hand set 2 every length to the body 10 of telephone according to the telephone 1 of the gestalt of this operation, at the same time it shortens a breadth dimension as compared with the conventional table top type and can form in a compact -- a hand set -- right and left of the body of telephone -- since it is made easy to take from any side, it will become suitable, when installing in a personal computer side by side and using as a terminal of a personal computer for example.

[0042] In addition, rear-face case 30b can be made to carry out temporary maintenance of the hook plunger 40, although it explained that the hook plunger 40 carried out temporary maintenance to front case 30a with the gestalt of the above-mentioned operation at the time of the assembly of a stand 30 without restricting to this. Moreover, although the gestalt of the above-mentioned operation explained as a type which arranges a hand set 2 every length to the body 10 of telephone, as for this invention, it is needless to say that it is applicable to such a gestalt also at \*\*\*\*\*, the conventional wall tapestry type, or a table top type.

[0043]

[Effect of the Invention] As stated above, the telephone concerning this invention was formed so that the pivot of a hook plunger might have a width across flat, and made the insertion slot on the bearing the flute width which carries out abbreviation coincidence with the width across flat of a pivot.

Thereby, if a pivot is inserted in a boss and rotated from an insertion slot, the ejection from the boss of a pivot is prevented and a hook plunger will be in the condition that temporary maintenance was carried out. Therefore, since cases can be made to coalesce in support of the hook plunger by which spring energization was carried out even if it is not pressing down the hook plunger by hand, assembly operation can be performed easily.

[0044] Moreover, since contiguity arrangement of the height of a hook plunger is carried out at the hook pawl of a hand-set receptacle, the contact to a height is made easily and a hand set can press a height certainly, when it applies to a hand-set receptacle. Moreover, since the height of a hook plunger is formed in the level difference configuration where the second page which the lower part apical surface or jaw of the perimeter of the receiver section of a hand set contacts was equipped, when a hand set is made to contact a hook plunger, a height can be pressed in respect of either of the hand sets. Therefore, a hook plunger can be certainly pushed in in the body of telephone. And even if it is the case where a hand set is put on a hand-set receptacle in the halfway condition, one field of the heights can be contacted and a height can be pressed.

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TECHNICAL FIELD

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[Field of the Invention] This invention relates to the telephone which arranges the hand set with which the transmitter/receiver part was formed every length in more detail about telephone.

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PRIOR ART

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[Description of the Prior Art] A hand set 62 is covered over the body 61 of telephone, and the telephone 60 of the conventional table top type is depressing the height 64 of the hook plunger 63 in the body 61 of telephone with the hand set 62, as shown in drawing 10.

[0003] And when a hand set 62 is removed from the body 61 of telephone, the hook plunger 63 rotates focusing on a pivot 66 by the spring energization force of a spring 65, and makes a height 64 project from the body 61 of telephone. At this time, telephone 60 is changed to a talk state by interrupting the optical path of photosensor (not shown) with the protruding piece 67 of the hook plunger 63.

[0004] By the built telephone 60, as shown in drawing 11, the body 61 of telephone makes upper case 61a and bottom case 61b coalesce, and is assembled. And in order to build the hook plunger 63 into the body 61 of telephone, the vertical cases 61a and 61b are made to coalesce, maintaining at the condition of having arranged the spring 65 between upper case 61a and the hook plunger 63, and fastening support of the pivot 66 of the hook plunger 63 is carried out by the bearing 68 of upper case 61a, and the axial attaching part 69 of bottom case 61b. Thereby, telephone 60 is assembled by the condition of drawing 10.

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EFFECT OF THE INVENTION

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[Effect of the Invention] As stated above, the telephone concerning this invention was formed so that the pivot of a hook plunger might have a width across flat, and made the insertion slot on the bearing the flute width which carries out abbreviation coincidence with the width across flat of a pivot. Thereby, if a pivot is inserted in a boss and rotated from an insertion slot, the ejection from the boss of a pivot is prevented and a hook plunger will be in the condition that temporary maintenance was carried out. Therefore, since cases can be made to coalesce in support of the hook plunger by which spring energization was carried out even if it is not pressing down the hook plunger by hand, assembly operation can be performed easily.

[0044] Moreover, since contiguity arrangement of the height of a hook plunger is carried out at the hook pawl of a hand-set receptacle, the contact to a height is made easily and a hand set can press a height certainly, when it applies to a hand-set receptacle. Moreover, since the height of a hook plunger is formed in the level difference configuration where the second page which the lower part apical surface or jaw of the perimeter of the receiver section of a hand set contacts was equipped, when a hand set is made to contact a hook plunger, a height can be pressed in respect of either of the hand sets. Therefore, a hook plunger can be certainly pushed in in the body of telephone. And even if it is the case where a hand set is put on a hand-set receptacle in the halfway condition, one field of the heights can be contacted and a height can be pressed.

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TECHNICAL PROBLEM

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[Problem(s) to be Solved by the Invention] However, since the spring 65 was arranged between upper case 61a and the hook plunger 63 at the time of assembly operation as described above, and the spring energization force acted on the hook plunger 63 and it was made to make the hook plunger 63 jump out of bearing 68, it was hard to do a coalesce activity with upper case 61a and bottom case 61b.

[0006] On the other hand, when a hand set 2 was covered over a hand-set receptacle and a hand set 2 was put on the halfway condition of having shifted from the location of normal, the hook plunger 63 might be unable to be depressed in the body 61 of telephone. For this reason, the situation where a communication line does not go out may be produced.

[0007] When this invention was made based on the above-mentioned actual condition, and attachment of a hook plunger of it is completed easily, and it can improve assembly-operation nature and a hand set is covered over a hand-set receptacle, even if it is in a halfway stop condition, it will aim at offering the telephone which pushes in a hook plunger in the body of telephone, and can cut a communication line certainly.

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MEANS

[Means for Solving the Problem] The telephone built over this invention in order to attain the above-mentioned purpose In the telephone which arranges the hand set with which the transmitter/receiver part was formed at least every length It has the hook plunger which spring energization is carried out [ plunger ] and makes the height at a tip project to a case outside surface while while forms the body of telephone and being supported free [ rocking ] focusing on a pivot with coalesce of a case and the case of another side, and the case of said pair. Bearing is formed in an insertion slot with the flute width which the pivot of said hook plunger is formed so that it may have a width across flat, the stop section which supports said hook plunger is open for free passage to a boss and this boss, and carries out abbreviation coincidence with the width across flat of said pivot. It is characterized by carrying out temporary maintenance at one [ said ] case or the case of another side by carrying out spring energization so that said hook plunger may make said boss insert said pivot from said insertion slot in front of case coalesce and the height at said tip may project from a case outside surface.

[0009] By this telephone, since the pivot of a hook plunger has a width across flat, has the flute width in which the insertion slot on the bearing carries out abbreviation coincidence with the width across flat of a pivot and is formed, a pivot is stopped by the boss from a boss at ejection impossible by carrying out spring energization of the hook plunger after inserting in a boss for a pivot from an insertion slot, and rotating a pivot. Therefore, even if it is not pressing down by hand the hook plunger by which spring energization was carried out, temporary maintenance can be carried out at a case and assembly-operation effectiveness can be improved.

[0010] Moreover, the telephone concerning this invention is characterized by having approached the hook pawl of the hand-set receptacle which stops said hand set, having projected and forming the height at the tip of said hook plunger.

[0011] By this telephone, since contiguity arrangement is carried out at the hook pawl of the hand-set receptacle which stops a hand set for the height of a hook plunger, when a hand set is covered over a hook pawl, contact of a hand set can be made easy and a hook plunger can be certainly pushed in in the body of telephone with the telephone which has arranged especially the hand set every length.

[0012] Moreover, the telephone concerning this invention is characterized by forming said height in the level difference configuration where the second page which the lower part apical surface or jaw of the perimeter of the receiver section of said hand set contacts was equipped.

[0013] By this telephone, since the height of a hook plunger was formed in the level difference configuration which the part where hand sets differ hits, when a hand set is made to contact a hook plunger, a height can be pressed in respect of either of the hand sets.

[0014] Moreover, if said hand set moves from the horizontal or perpendicular direction of said body of telephone and said hand-set receptacle is made to stop the telephone concerning this invention, it is characterized by resisting the spring energization force and pressing this height in contact with said height.

[0015] By this telephone, since the height of a hook plunger is made to press a hand set even if it is level or the case where a hand-set receptacle is stopped from which direction of vertical of the body of telephone, a hook plunger is always pushed in in the body of telephone.

[0016]

[Embodiment of the Invention] Hereafter, the gestalt of suitable operation of the telephone

concerning this invention is explained in full detail based on a drawing. The decomposition perspective view showing the gestalt of 1 operation of the telephone which drawing 1 requires for this invention, the decomposition perspective view of a stand [ in / in drawing 2 / the telephone of drawing 1 ], Drawing 3 shows the important section of the hand-set receptacle of the stand of drawing 2 . A spring The sectional view of a compression condition, Drawing 4 shows the A section enlarged drawing of drawing 3 , and drawing 5 shows the important section of the hand-set receptacle of the stand of drawing 2 . The condition of having removed the hand set of the telephone which the sectional view in the condition that spring compression was canceled, and drawing 6 require for the B section sectional view of drawing 5 , and drawing 7 requires for this invention a part A sectional view, a part of condition that drawing 8 made the hand-set receptacle stop the hand set of the telephone concerning this invention -- a part of condition that a sectional view and drawing 9 made the hand-set receptacle stop the hand set of the telephone concerning this invention halfway - it is a sectional view. In addition, the gestalt of this operation explains the new type which arranges a hand set every length to the body of telephone as telephone.

[0017] The telephone 1 of the gestalt of this operation is equipped with the hand set 2 with which transmission section 2a and receiver section 2b were formed, and the body 10 which arranges this hand set 2 every length as shown in drawing 1 . A body 10 serves as the base section 11 in which push button control unit 11a and monitor section 12b were formed from the stand 30 attached to the base section 11 in one in order to support a hand set 2 longitudinally. In addition, the non-illustrated communication circuit substrate is held in the base section 11.

[0018] The base section 11 is the gestalt in which the rear face 14 of the downhill grade which is a predetermined tilt angle and followed backside [ a peripheral wall 12 ] upper limit in the actuation side 13 was formed while going up to before [ a peripheral wall 12 ] side upper limit by the predetermined tilt angle and forming the actuation side 13 of inclination. The actuation side 13 was made into the rectangle-like flat surface, and has equipped push button control unit 11a formed ranging from lower limit section 13a to a center section, and monitor section 12b formed in upper limit section 13b.

[0019] The stand fitting section 15 which became depressed in the concave is formed in a rear face 14, and the base 16 of the stand fitting section 15 is made horizontally. In order to make the workability with a group of a stand 30 good, the spigot hole which is not illustrated for inserting the stop pawl 33 of the stand 30 mentioned later is \*\*\*\*(ed) by this base 16. That is, temporary maintenance of the stand 30 is carried out at the stand fitting section 15 by inserting the pars basilaris ossis occipitalis 31 of a stand 30 in the stand fitting section 15, and inserting in a spigot hole the stop pawl 33 of the pair projected and formed in the front end edge of a pars basilaris ossis occipitalis 31.

[0020] The modular jack which is not illustrated for connecting connection terminal 6a of the hand-set code 6 is formed in the bottom plate of the base section 11, and the hand-set code 6 linked to this modular jack is pulled out from the through-hole 22 of the lower part of a peripheral wall 12. Moreover, near the back end of the bottom plate of the base section 11, the modular jack which is not illustrated for connecting connection terminal 25a of the modular code 25 is formed, and the modular code 25 is pulled out from the backside [ the base section 11 ]. In addition, the hand-set code 6 connects a hand set 2 and the base section 11, and the modular code 25 connects the base section 11 and a non-illustrated external modular jack.

[0021] A stand 30 is set up at a predetermined include angle to the actuation side 13 of push button control unit 11a, and is arranged in the abbreviation center section of the base section 11 in \*\*\*\*\*. From the stand fitting section 15, a stand 30 can be formed small a little and can fit into the stand fitting section 15 while the pars basilaris ossis occipitalis 31 which makes one case (front case) 30a and case (rear-face case) 30b of another side come to coalesce is formed in the shape of an abbreviation rectangle object. As mentioned already, the stop pawl 33 of a pair projects and is formed in the front end of this pars basilaris ossis occipitalis 31.

[0022] Furthermore, the accession department 35 for becoming depressed in the front lower part part of a stand 30 in the shape of cross-section \*\*\*\*, and accepting transmission section 2a of a hand set 2 in it is formed, and the corner 36 for carrying jaw 2e of receiver section 2b is projected and formed in the front upper part of a stand 30.

[0023] It inserts into 2g (refer to drawing 7 ) of stop holes of a hand set 2, and while the hook pawl



38 on which a hand set 2 is made to hang projects and is formed, the height 41 at the tip of the hook plunger 40 projected from opening 36b close to the hook pawl 38 is formed in top-face 36a of this corner 36 free [ frequent appearance ]. And a height 41 is pushed in in a stand 30 by making top-face 36a of this corner 36 support receiver section 2b.

[0024] the installation condition of a hand set 2 which forms a level difference configuration in a height 41 as shown in drawing 3 and drawing 5 that page [ second ] 41a and 41b are equipped, and these fields 41a and 41b are supported by corner 36 top-face 36a -- how -- it is pressed by contact of the part where hand sets 2 differ even if it is a case.

[0025] A hand set 2 is the configuration that the tooth-back covering 3 was formed in the shape of an abbreviation rectangle, transmission section 2a was formed in the lower limit section 4, and receiver section 2b was formed in the upper limit section 5, respectively. The MOJURA jacks 7a and 7b whose connection of connection terminal 6b of the hand-set code 6 was enabled at the left and right laterals 2c and 2d of transmission section 2a are attached downward with the predetermined tilt angle (for example, 45 degrees), respectively.

[0026] When this tilt angle makes a stand 30 support a hand set 2, the hand-set code 6 linked to the MOJURA jacks 7a and 7b is set up in order to avoid interference with the base section 11. Moreover, since the MOJURA jacks 7a and 7b are formed in left and right laterals 2c and 2d, the hand-set code 6 chooses a right-and-left [ one of ] side alternatively according to the use part of telephone 1, and can connect it.

[0027] As shown in drawing 2, a stand 30 is coalescing and supports front case 30a and rear-face case 30b for the hook plunger 40, enabling free rocking. Protrusion formation of the stop section 44 for supporting the hook plunger 40, enabling free rocking and the cylinder-like spring attaching part 46 is carried out at the internal surface of front case 30a of a stand 30.

[0028] The spring attaching part 46 carries out insertion maintenance of the spring 45, and as shown in drawing 1, this spring 45 carries out spring energization of the height 41 of the hook plunger 40, and enables frequent appearance of a height 41 to a case outside surface from opening 36b. And the bearing of the stop section 44 which mentions the pivot 43 of the hook plunger 40 later is made to support a stand 30, and after changing into the condition of having carried out spring energization with the spring 45 which inserted the hook plunger 40 in the spring attaching part 46, it is assembled with coalesce with front case 30a and rear-face case 30b.

[0029] As shown in drawing 4, the hook plunger 40 has the width across flat W1 to which the pivot 43 carried out opposite arrangement of the flat sides 43a and 43a of a pair, and is formed. On the other hand, bearing is formed of insertion slot 44b of the flute width W2 (detailed, slightly larger width of face than a width across flat W1) which the stop section 44 which supports the hook plunger 40 is open for free passage to boss 44a and this boss 44a, and carries out abbreviation coincidence with the width across flat W1 of a pivot 43.

[0030] Therefore, a pivot 43 can be inserted in boss 44a by changing into the condition of having maintained the posture of the hook plunger 40 so that the flat sides 43a and 43a might counter with the wall surface of insertion slot 44b, and inserting in insertion slot 44b. In addition, where the posture of the hook plunger 40 is maintained, as shown in drawing 3, the compression set of the spring 45 is carried out so that a pivot 43 can insert in insertion slot 44b.

[0031] If the compression set of a spring 45 is canceled and the hook plunger 40 is rotated as shown in drawing 5 after inserting a pivot 43 in boss 44a, the height 41 at the tip of the hook plunger 40 projects from opening 36b of a stand 30 to a case outside surface.

[0032] Moreover, when the hook plunger 40 rotates, as shown in drawing 6, a pivot 43 is rotated so that insertion slot 44b and the flat sides 43a and 43a which countered may separate from insertion slot 44b. Thereby, a shaft diameter with larger \*\*\*\*\* 43 than the flute width W2 of insertion slot 44b is located in the free passage section with insertion slot 44b, and ejection from boss 44a is made into impossible.

[0033] Therefore, even if it does not support the hook plunger 40 by hand, it is changed into the condition of having made the pivot 43 inserting in boss 44a, and temporary maintenance is carried out at the front case 30a side. Therefore, rear-face case 30b can be put and cases can be made to coalesce at the time of the assembly of a stand 30, where temporary maintenance of the hook plunger 40 is carried out at front case 30a.

[0034] As shown in drawing 1, after it inserts the stop pawl 33 formed in the pars basilaris ossis occipitalis 31 in the spigot hole which is not illustrated [ which was formed in the stand fitting section 15 ] and it carries out temporary maintenance at the base section 11, a stand 30 fixes in the base section 11, and is attached in one. And telephone 1 connects the base section 11 and a hand set 2 in hand-set code 6, and is assembled.

[0035] If one is equipped with a stand 30, as shown in drawing 7, the corner 36 which supports a hand set 2 will project in the front upper part of a stand 30, and telephone 1 will be formed. And while the hook pawl 38 which hangs a hand set 2 projects, this hook pawl 38 is approached and the height 41 of the hook plunger 40 protrudes on top-face 36a of a corner 36 possible [ frequent appearance ].

[0036] Although certainly supported by the hand set 2 to a stand 30 by hanging 2g of stop holes of a hand set 2 on the hook pawl 38 as the telephone 1 by the above configuration shows to drawing 8, since contiguity arrangement of the height 41 of the hook plunger 40 is carried out at the hook pawl 38 in this case, as for a hand set 2, the contact to a height 41 is easily made irrespective of that installation condition, a height 41 is pushed in in a stand 30, and it can do.

[0037] In addition, since the height 41 is formed in the level difference configuration where the second page which 2f of lower part apical surfaces around [ receiver section 2b ] a hand set 2 and jaw 2e contact was equipped As shown in drawing 9, even when a hand set 2 is put on a hand-set receptacle in the halfway condition of not inserting the hook pawl 38 in 2g of spigot holes completely For example, a height 41 can be pressed, when jaw 2e of a hand set 2 contacts the 1st page 41a or 2f of lower part apical surfaces around [ receiver section 2b ] a hand set 2 contacts the 2nd page 41b. That is, a hand set 2 can press a height 41 in respect of the either, and can always cut a line of contact certainly.

[0038] Thus, since the height 41 has equipped the second page of a level difference configuration, when a hand set 2 is covered over a hand-set receptacle, a hand set 2 can contact one field of the heights 41, and can push in the hook plunger 40 in a stand 30.

[0039] Moreover, as shown in drawing 7, even if a hand set 2 is the case where a hand-set receptacle is stopped from the horizontal direction (the direction of arrow-head a) of the body 10 of telephone, or which direction of vertical (the direction of arrow-head b), it can push in the hook plunger 40 in a stand 30 in contact with the height 41 equipped with the second page of a level difference configuration.

[0040] Therefore, even if it makes the hook pawl 38 for hand-set receptacles stop the hand set 2 of a stand 30 from the which direction of horizontal or a perpendicular direction, the height 41 of the hook plunger 40 can be pressed with a hand set 2. For this reason, when a hand set 2 is covered over the hook pawl 38, the hook plunger 40 can be certainly pushed in in a stand 30 with a hand set 2.

[0041] since it constituted as a new type which arranges a hand set 2 every length to the body 10 of telephone according to the telephone 1 of the gestalt of this operation, at the same time it shortens a breadth dimension as compared with the conventional table top type and can form in a compact -- a hand set -- right and left of the body of telephone -- since it is made easy to take from any side, it will become suitable, when installing in a personal computer side by side and using as a terminal of a personal computer for example.

[0042] In addition, rear-face case 30b can be made to carry out temporary maintenance of the hook plunger 40, although it explained that the hook plunger 40 carried out temporary maintenance to front case 30a with the gestalt of the above-mentioned operation at the time of the assembly of a stand 30 without restricting to this. Moreover, although the gestalt of the above-mentioned operation explained as a type which arranges a hand set 2 every length to the body 10 of telephone, as for this invention, it is needless to say that it is applicable to such a gestalt also at \*\*\*\*\*, the conventional wall tapestry type, or a table top type.

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[Translation done.]

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1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

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DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1] It is the decomposition perspective view showing the gestalt of 1 operation of the telephone concerning this invention.

[Drawing 2] It is the decomposition perspective view of the stand in the telephone of drawing 1.

[Drawing 3] It is a sectional view in the condition that the important section of the hand-set receptacle of the stand of drawing 2 was shown, and the spring was compressed.

[Drawing 4] It is the A section enlarged drawing of drawing 3.

[Drawing 5] It is a sectional view in the condition that the important section of the hand-set receptacle of the stand of drawing 2 was shown, and spring compression was canceled.

[Drawing 6] It is the B section sectional view of drawing 5.

[Drawing 7] a part of condition of having removed the hand set of the telephone concerning this invention -- it is a sectional view.

[Drawing 8] a part of condition of having covered the hand set of the telephone concerning this invention over the hand-set receptacle -- it is a sectional view.

[Drawing 9] a part of condition of having covered the hand set of the telephone concerning this invention over the hand-set receptacle halfway -- it is a sectional view.

[Drawing 10] It is the sectional view of the conventional telephone.

[Drawing 11] It is the decomposition sectional view of the conventional telephone.

[Description of Notations]

1 Telephone

2 Hand Set

2a Transmission section

2b Receiver section

2e The lower part jaw of the perimeter of the receiver section

2f Lower part apical surface of the perimeter of the receiver section

30 Stand (Body of Telephone)

30a Front case (one case)

30b Rear-face case (case of another side)

38 Hook Pawl

40 Hook Plunger

41 Height

43 Pivot

44 Stop Section

44a Boss

44b Insertion slot

W1 Width across flat of a pivot

W2 Flute width of an insertion slot

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[Translation done.]

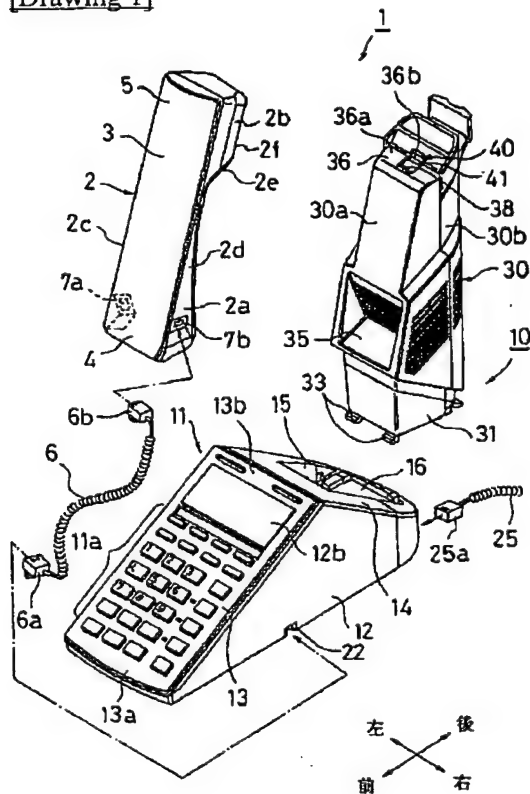
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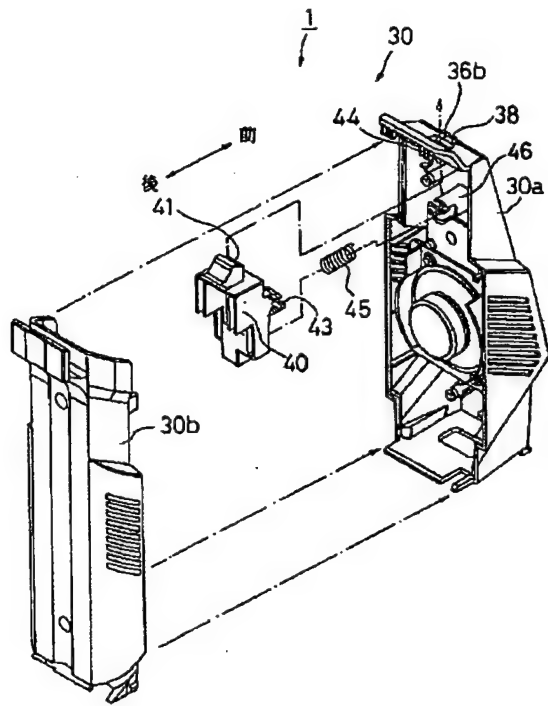
1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

## DRAWINGS

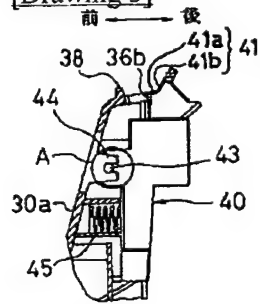
[Drawing 1]



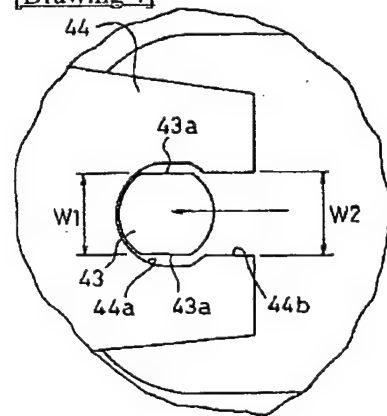
[Drawing 2]



[Drawing 3]

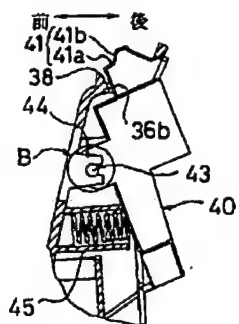


[Drawing 4]

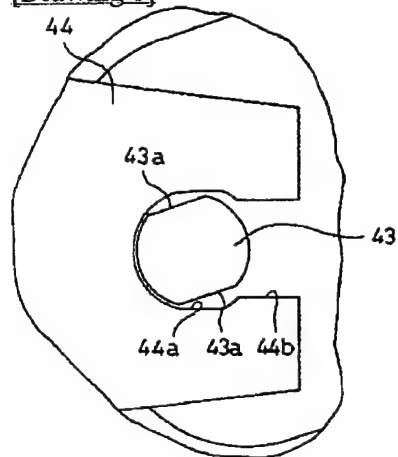


[Drawing 5]

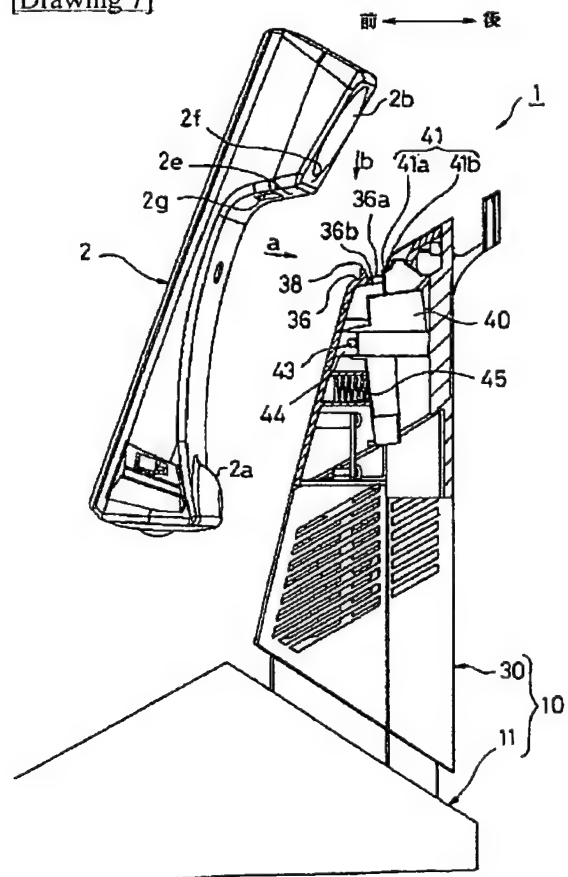




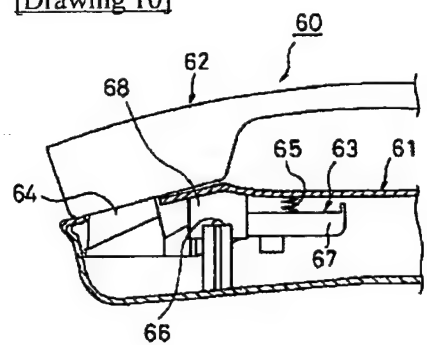
[Drawing 6]



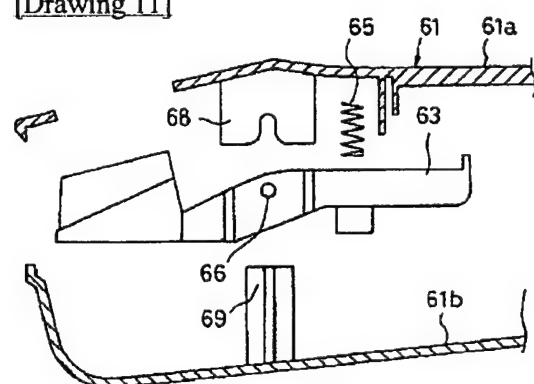
[Drawing 7]



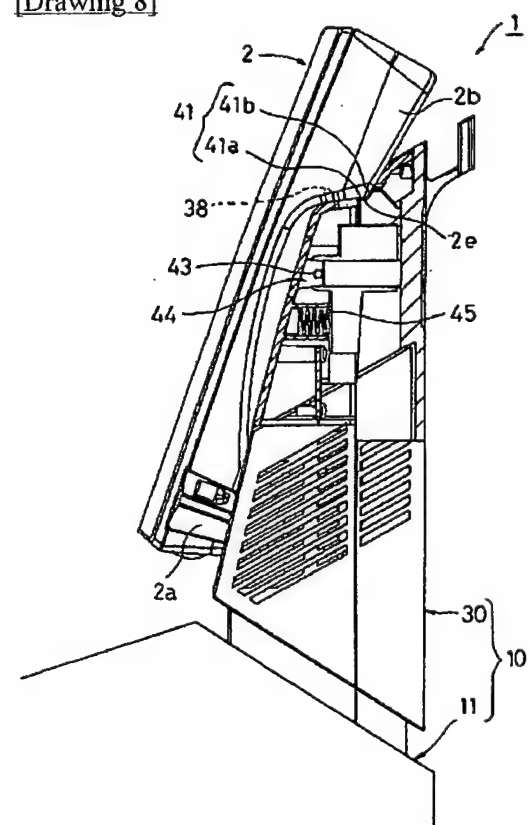
[Drawing 10]



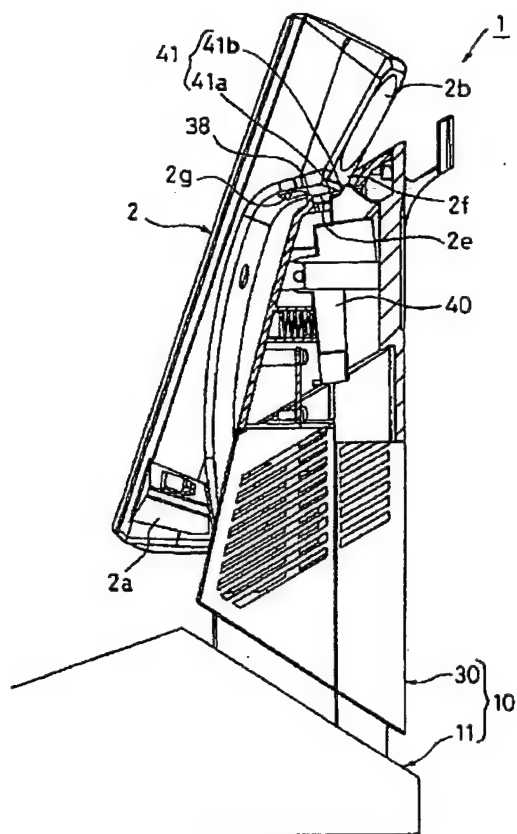
[Drawing 11]



[Drawing 8]



[Drawing 9]



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[Translation done.]

(19)日本国特許庁 (J P)

(12) 公開特許公報 (A)

(11)特許出願公開番号

特開2002-354091

(P2002-354091A)

(43)公開日 平成14年12月6日(2002.12.6)

(51)Int.Cl.<sup>7</sup>

識別記号

F I

データベース(参考)

H 0 4 M 1/04

H 0 4 M 1/04

Z 5 K 0 2 3

1/06

1/06

A

審査請求 未請求 請求項の数4 O L (全 8 頁)

(21)出願番号 特願2001-152645(P2001-152645)

(22)出願日 平成13年5月22日(2001.5.22)

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Fターム(参考) 5K023 BB11 CC01 DD01 EE10 FF02

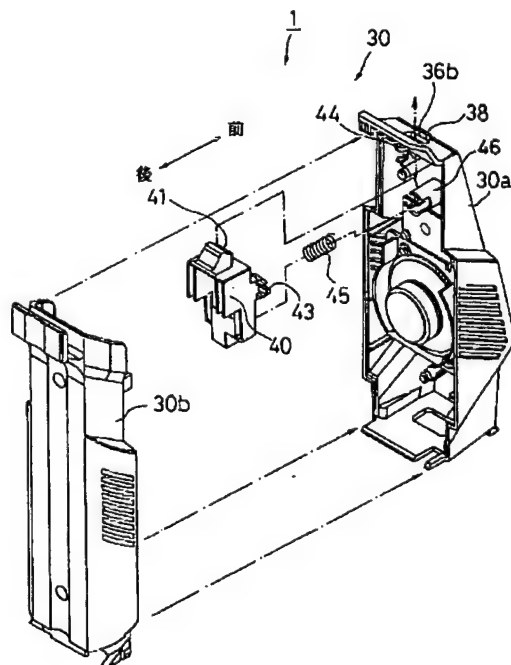
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(54)【発明の名称】 電話機

(57)【要約】

【課題】 組立作業を容易に行うことができ、且つ、電話機本体にハンドセットをかけたときに、フックブランジャを電話機本体内に確実に押し込むことができる電話機を得る。

【解決手段】 揺動自在なフックブランジャ40の支軸43を二面幅を有するように形成すると共に、フックブランジャ40を支持する係止部44の軸受を、軸孔と該軸孔に連通し、且つ、前記支軸43の二面幅と略一致する溝幅を有した挿入溝とで形成する。また、フックブランジャ40の突起部41は、ハンドセットの異なる部位が当接して押圧できる段差形状の二面を備える。



【特許請求の範囲】

【請求項1】 少なくとも送受話部が形成されたハンドセットを縦置き配置する電話機において、

電話機本体を形成する一方のケース及び他方のケースと、前記一对のケースの合体により支軸を中心に揺動自在に支持されると共にばね付勢されて先端の突起部をケース外表面に突出させるフックブランジャとを備え、前記フックブランジャの支軸を二面幅を有するように形成し、

前記フックブランジャを支持する係止部が軸孔と該軸孔に連通し且つ前記支軸の二面幅と略一致する溝幅を有した挿入溝とで軸受を形成し、

前記フックブランジャがケース合体前に前記支軸を前記挿入溝より前記軸孔に嵌入させて前記先端の突起部がケース外表面より突出するようにばね付勢されることにより前記一方のケース又は他方のケースに仮保持されることを特徴とする電話機。

【請求項2】 前記フックブランジャの先端の突起部を前記ハンドセットを係止するハンドセット受けのフック爪に近接して突出形成したことを特徴とする請求項1記載の電話機。

【請求項3】 前記突起部が、前記ハンドセットの受話部周囲の下方先端面又は顎部が当接する二面を装備した段差形状に形成されたことを特徴とする請求項2記載の電話機。

【請求項4】 前記ハンドセットが前記電話機本体の水平又は垂直方向から移動して前記ハンドセット受けに係止させると前記突起部に当接して該突起部をばね付勢力に抗して押圧することを特徴とする請求項3記載の電話機。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】 本発明は電話機に関し、更に詳しくは、送受話部が形成されたハンドセットを縦置き配置する電話機に関する。

【0002】

【従来の技術】 従来の卓上型の電話機60は、図10に示すように、電話機本体61にハンドセット62がかけられ、ハンドセット62でフックブランジャ63の突起部64を電話機本体61内に押し下げている。

【0003】 そして、電話機本体61からハンドセット62を外すと、フックブランジャ63はばね65のばね付勢力で支軸66を中心に回転して突起部64を電話機本体61から突出させる。このとき、フックブランジャ63の突片67でフォトセンサ（図示せず）の光路を遮ることにより、電話機60は通話状態に切り替えられる。

【0004】 係る電話機60では、図11に示すように、電話機本体61が上ケース61a及び下ケース61bを合体させて組み立てられている。そして、電話機本

体61にフックブランジャ63を組み込むには、例えば上ケース61aとフックブランジャ63との間にばね65を配置した状態に保ちながら上下ケース61a、61bを合体させ、フックブランジャ63の支軸66を上ケース61aの軸受68と下ケース61bの軸保持部69とで挟着支持する。これにより、電話機60は、図10の状態に組み立てられる。

【0005】

【発明が解決しようとする課題】 しかし、組立作業時、上記したように、上ケース61aとフックブランジャ63との間にばね65を配置しているため、ばね付勢力がフックブランジャ63に作用して、フックブランジャ63を軸受68から飛び出させるようにするので、上ケース61aと下ケース61bとの合体作業が行い難かった。

【0006】 一方、ハンドセット2をハンドセット受けにかけたときに、ハンドセット2が正規の位置からずれた中途半端な状態に置かれた場合、フックブランジャ63を電話機本体61内に押し下げることができないことがあった。このため、通信回線が切れないといった事態を生じることがある。

【0007】 本発明は上記実情に基づいてなされたもので、フックブランジャの組み付けが容易にできて組立作業性を向上でき、また、ハンドセットをハンドセット受けにかけたときに、たとえ中途半端な係止状態にあってもフックブランジャを電話機本体61内に押し込んで通信回線を確実に切断できる電話機を提供することを目的としたものである。

【0008】

【課題を解決するための手段】 上記目的を達成するために本発明に係る電話機は、少なくとも送受話部が形成されたハンドセットを縦置き配置する電話機において、電話機本体を形成する一方のケース及び他方のケースと、前記一对のケースの合体により支軸を中心に揺動自在に支持されると共にばね付勢されて先端の突起部をケース外表面に突出させるフックブランジャとを備え、前記フックブランジャの支軸を二面幅を有するように形成し、前記フックブランジャを支持する係止部が軸孔と該軸孔に連通し且つ前記支軸の二面幅と略一致する溝幅を有した挿入溝とで軸受を形成し、前記フックブランジャがケース合体前に前記支軸を前記挿入溝より前記軸孔に嵌入させて前記先端の突起部がケース外表面より突出するようにばね付勢されることにより前記一方のケース又は他方のケースに仮保持されることを特徴とする。

【0009】 この電話機では、フックブランジャの支軸が二面幅を有し、軸受の挿入溝が支軸の二面幅と略一致する溝幅を有して形成されるので、支軸を挿入溝より軸孔に嵌入後、フックブランジャをばね付勢して支軸を回転させることにより、支軸が軸孔より抜け出し不能に軸孔に係止される。よって、ばね付勢されたフックブラン



ジャを手で押さえていなくても、ケースに仮保持できて組立作業効率を向上できる。

【0010】また本発明に係る電話機は、前記フックブラランジャの先端の突起部を前記ハンドセットを係止するハンドセット受けのフック爪に近接して突出形成したことを特徴とする。

【0011】この電話機では、フックブラランジャの突起部をハンドセットを係止するハンドセット受けのフック爪に近接配置しているので、特にハンドセットを縦置き配置した電話機では、フック爪にハンドセットをかけたときに、ハンドセットの当接を容易にしてフックブラランジャを電話機本体内に確実に押し込むことができる。

【0012】また本発明に係る電話機は、前記突起部が、前記ハンドセットの受話部周囲の下方先端面又は顎部が当接する二面を装備した段差形状に形成されたことを特徴とする。

【0013】この電話機では、フックブラランジャの突起部を、ハンドセットの異なる部位が当たる段差形状に形成したので、ハンドセットをフックブラランジャに当接させたときに、ハンドセットのいずれかの面で突起部を押圧することができる。

【0014】また本発明に係る電話機は、前記ハンドセットが前記電話機本体の水平又は垂直方向から移動して前記ハンドセット受けに係止させると前記突起部に当接して該突起部をばね付勢力に抗して押圧することを特徴としている。

【0015】この電話機では、ハンドセットを、電話機本体の水平又は垂直方向のいずれの方向からハンドセット受けに係止させた場合であっても、フックブラランジャの突起部が押圧されるようにしているので、フックブラランジャは常に電話機本体内に押し込まれる。

【0016】

【発明の実施の形態】以下、本発明に係る電話機の好適な実施の形態を図面に基づいて詳説する。図1は本発明に係る電話機の一実施の形態を示す分解斜視図、図2は図1の電話機におけるスタンドの分解斜視図、図3は図2のスタンドのハンドセット受けの要部を示し、ばねが圧縮状態の断面図、図4は図3のA部拡大図、図5は図2のスタンドのハンドセット受けの要部を示し、ばね圧縮が解除された状態の断面図、図6は図5のB部断面図、図7は本発明に係る電話機のハンドセットを外した状態の一部断面図、図8は本発明に係る電話機のハンドセットをハンドセット受けに係止させた状態の一部断面図、図9は本発明に係る電話機のハンドセットをハンドセット受けに中途半端に係止させた状態の一部断面図である。なお、本実施の形態では、電話機として、ハンドセットを電話機本体に対して縦置き配置する新規なタイプについて説明する。

【0017】この実施の形態の電話機1は、図1に示すように、送話部2a及び受話部2bが形成されたハンド

セット2と、このハンドセット2を縦置き配置する本体10とを備える。本体10は、押釦操作部11a及びモニター部12bを形成したベース部11と、ハンドセット2を縦置きに支持するためベース部11に一体的に組み付けられるスタンド30とからなる。なお、ベース部11には不図示の通信回路基板が収容されている。

【0018】ベース部11は、周壁12の前側上端に所定の傾斜角で上がり勾配の操作面13が形成されると共に、周壁12の後側上端に所定の傾斜角で、操作面13に連続した下り勾配の後面14が形成された形態である。操作面13は矩形状の平面とされ、下端部13aから中央部にわたって形成した押釦操作部11aと、上端部13bに形成したモニター部12bとを装備している。

【0019】後面14には、凹状に窪んだスタンド嵌合部15が形成され、スタンド嵌合部15の底面16は水平になされている。この底面16には、スタンド30の組付作業性を良好にするために、後述するスタンド30の係止爪33を差込むための不図示の差込孔が透設されている。つまり、スタンド30の底部31をスタンド嵌合部15に嵌入して、底部31の前端縁に突出形成した一对の係止爪33を差込孔に差し込むことにより、スタンド30がスタンド嵌合部15に仮保持されるようになっている。

【0020】ベース部11の底板には、ハンドセットコード6の接続端子6aを接続するための不図示のモジュラー・ジャックが形成され、このモジュラー・ジャックに接続したハンドセットコード6が周壁12の下方の通孔22から引き出されるようになっている。また、ベース部11の底板の後端近傍には、モジュラーコード25の接続端子25aを接続するための不図示のモジュラー・ジャックが形成され、モジュラーコード25がベース部11の後側から引き出されるようになっている。なお、ハンドセットコード6はハンドセット2とベース部11とを接続し、モジュラーコード25はベース部11と不図示の外部モジュラー・ジャックとを接続する。

【0021】スタンド30は、押釦操作部11aの操作面13に対し所定角度で立設し、前面視において、ベース部11の略中央部に配置されるようになっている。スタンド30は、一方のケース（前面ケース）30aと他方のケース（後面ケース）30bとを合体させてなる底部31が略矩形体状に形成されると共に、スタンド嵌合部15より若干小さく形成されて、スタンド嵌合部15に嵌合することができるようになっている。この底部31の前端には、既述したように一对の係止爪33が突出形成されている。

【0022】さらに、スタンド30の前面下方部位には、断面く字状に窪んでハンドセット2の送話部2aを受け入れるための受入部35が形成され、また、スタンド30の前面上部には、受話部2bの顎部2eを載せる

ための角部36が突出形成される。

【0023】この角部36の上面36aには、ハンドセット2の係止孔2g(図7参照)に係入して、ハンドセット2を掛止させるフック爪38が突出形成されると共に、フック爪38に近接した開口部36bより突出したフックブランジャ40の先端の突起部41が出没自在に設けられている。そして、受話部2bを、この角部36の上面36aに支持させることで、突起部41がスタンド30内に押し込まれるようになっている。

【0024】突起部41には、図3及び図5に示すように、段差形状を形成する二面41a、41bが装備されており、これらの面41a、41bは、角部36上面36aに支持されるハンドセット2の取り付け具合がどのような場合であっても、ハンドセット2の異なる部位の当接によって押圧されるようになっている。

【0025】ハンドセット2は、背面カバー3が略矩形状に形成され、下端部4に送話部2aが、上端部5に受話部2bがそれぞれ形成された構成である。送話部2aの左右側面2c、2dには、ハンドセットコード6の接続端子6bを接続可能にしたモジュラ・ジャック7a、7bがそれぞれ所定の傾斜角(例えば45°)で下向きに取り付けられている。

【0026】この傾斜角は、ハンドセット2をスタンド30に支持させた際、モジュラ・ジャック7a、7bと接続したハンドセットコード6が、ベース部11との干渉を避けるために設定されたものである。また、モジュラ・ジャック7a、7bが左右側面2c、2dに設けられているので、ハンドセットコード6は電話機1の使用箇所に応じて左右いずれかの側を択一的に選択して接続できるようになっている。

【0027】スタンド30は、図2に示すように、前面ケース30aと後面ケース30bとを合体することで、フックブランジャ40を揺動自在に支持する。スタンド30の前面ケース30aの内壁面には、フックブランジャ40を揺動自在に支持するための係止部44及び円筒状のばね保持部46が突設形成されている。

【0028】ばね保持部46は、ばね45を嵌入保持するもので、このばね45は、図1に示すように、フックブランジャ40の突起部41をばね付勢して、突起部41を開口部36bからケース外表面に出没自在にする。そして、スタンド30は、フックブランジャ40の支軸43を後述する係止部44の軸受に支持させて、フックブランジャ40を、ばね保持部46に嵌入したばね45でばね付勢した状態にした後、前面ケース30aと後面ケース30bとの合体により組み立てられる。

【0029】フックブランジャ40は、図4に示すように支軸43が一对の平坦面43a、43aを対向配置した二面幅W1を有して形成されている。一方、フックブランジャ40を支持する係止部44は、軸孔44aとこの軸孔44aに連通し、且つ、支軸43の二面幅W1と

略一致する溝幅W2(詳しくは、二面幅W1より僅かに大きい幅)の挿入溝44bとによって軸受が形成されている。

【0030】よって、支軸43は、平坦面43a、43aが挿入溝44bの壁面と対向するようにフックブランジャ40の姿勢を保った状態にして挿入溝44bに挿通することにより、軸孔44aに嵌入することができる。なお、支軸43が挿入溝44bに挿通できるように、フックブランジャ40の姿勢を保った状態では、図3に示すように、ばね45は圧縮変形されている。

【0031】支軸43を軸孔44aに嵌入した後、図5に示すように、ばね45の圧縮変形を解除してフックブランジャ40を回動させると、フックブランジャ40の先端の突起部41がスタンド30の開口部36bからケース外表面から突出する。

【0032】また、フックブランジャ40が回動することにより、図6に示すように、支軸43は挿入溝44bと対向した平坦面43a、43aが挿入溝44bから外れるように回転する。これにより、支軸43は、挿入溝44bの溝幅W2より大きい軸径が挿入溝44bとの連通部に位置して、軸孔44aからの抜け出しが不能にされる。

【0033】従って、フックブランジャ40は手で支えていなくても、支軸43を軸孔44aに嵌入させた状態にして、前面ケース30a側に仮保持される。よって、スタンド30の組立時、フックブランジャ40を前面ケース30aに仮保持した状態で、後面ケース30bを被着してケース同士を合体させることができる。

【0034】スタンド30は、図1に示すように、その底部31に形成した係止爪33を、スタンド嵌合部15に形成した不図示の差込孔に差し込んで、ベース部11に仮保持した後、ベース部11に固着して一体的に組み付けられる。そして、電話機1は、ベース部11とハンドセット2とをハンドセットコード6で接続して組み立てられる。

【0035】スタンド30が一体に装備されると、図7に示すように、電話機1は、ハンドセット2を支持する角部36がスタンド30の前面上部に突出形成される。そして、角部36の上面36aには、ハンドセット2を掛止するフック爪38が突出すると共に、このフック爪38に近接して、フックブランジャ40の突起部41が出没可能に突設される。

【0036】以上の構成による電話機1では、図8に示すように、ハンドセット2の係止孔2gをフック爪38に掛止することで、ハンドセット2はスタンド30に確実に支持されるのであるが、この際、フックブランジャ40の突起部41をフック爪38に近接配置しているため、ハンドセット2はその取り付け具合に係わらず、突起部41への当接が容易になされて突起部41をスタンド30内に押し込みできる。

【0037】加えて、突起部41は、ハンドセット2の受話部2b周囲の下方先端面2f又は顎部2eが当接する二面を装備した段差形状に形成されているので、図9に示すように、ハンドセット2が、フック爪38を差込孔2gに完全に嵌め込まない中途半端な状態でハンドセット受けに置かれた場合でも、例えば、ハンドセット2の顎部2eがその第1面41aに当接し、あるいは、ハンドセット2の受話部2b周囲の下方先端面2fがその第2面41bに当接することによって、突起部41を押圧することができる。つまり、ハンドセット2はそのいずれかの面で突起部41を押圧できて、通話回線を常時確実に切断することができる。

【0038】このように、突起部41が段差形状の二面を装備しているのので、ハンドセット2をハンドセット受けにかけたときに、ハンドセット2が突起部41のいずれかの面に当接して、フックブランジャ40をスタンド30内に押し込むことができる。

【0039】また、ハンドセット2は、図7に示すように、電話機本体10の水平方向（矢印a方向）又は垂直方向（矢印b方向）のいずれの方向からハンドセット受けに係止させる場合であっても、段差形状の二面が装備された突起部41に当接してフックブランジャ40をスタンド30内に押し込むことができる。

【0040】よって、スタンド30の水平方向又は垂直方向のどちらの方向からハンドセット2をハンドセット受け用のフック爪38に係止させても、フックブランジャ40の突起部41をハンドセット2で押圧することができる。このため、フック爪38にハンドセット2をかけたときに、ハンドセット2でフックブランジャ40をスタンド30内に確実に押し込むことができる。

【0041】本実施の形態の電話機1によれば、ハンドセット2を電話機本体10に対して縦置き配置する新規なタイプとして構成したので、従来の卓上型と比較して横幅寸法を短縮してコンパクトに形成できると同時に、ハンドセットを電話機本体の左右いずれの側からもとり易くしているので、例えば、パソコンに並設してパソコンの端末として利用するような場合に好適なものとなる。

【0042】なお、上記の実施の形態では、スタンド30の組立時、フックブランジャ40を前面ケース30aに仮保持させるように説明したが、これに限らないで、フックブランジャ40を後面ケース30bに仮保持させるようにすることもできる。また、上記の実施の形態では、ハンドセット2を電話機本体10に対して縦置き配置するタイプとして説明したが、本発明はこのような形態に限らず、従来の壁掛けタイプや卓上型にも適用できることは勿論である。

【0043】

【発明の効果】以上述べたように、本発明に係る電話機は、フックブランジャの支軸が二面幅を有するように形

成し、軸受の挿入溝を支軸の二面幅と略一致する溝幅とした。これにより、支軸を挿入溝より軸孔に挿通して回転させると、支軸の軸孔よりの抜け出しが阻止され、フックブランジャが仮保持された状態となる。従って、フックブランジャを手で押さえていなくても、ばね付勢されたフックブランジャを支持してケース同士を合体させることができるので、組立作業を容易に行うことができる。

【0044】また、フックブランジャの突起部が、ハンドセット受けのフック爪に近接配置されているので、ハンドセットは、ハンドセット受けにかけたときに突起部との当接が容易になされて突起部を確実に押圧できる。また、フックブランジャの突起部が、ハンドセットの受話部周囲の下方先端面又は顎部が当接する二面を装備した段差形状に形成されているので、ハンドセットをフックブランジャに当接させたときに、ハンドセットのいずれかの面で突起部を押圧できる。従って、フックブランジャを電話機本体内に確実に押し込むことができる。しかも、ハンドセットが中途半端な状態でハンドセット受けに置かれた場合であっても、突起部のいずれかの面に当接して、突起部を押圧することができる。

【図面の簡単な説明】

【図1】本発明に係る電話機の一実施の形態を示す分解斜視図である。

【図2】図1の電話機におけるスタンドの分解斜視図である。

【図3】図2のスタンドのハンドセット受けの要部を示し、ばねが圧縮された状態での断面図である。

【図4】図3のA部拡大図である。

【図5】図2のスタンドのハンドセット受けの要部を示し、ばね圧縮が解除された状態での断面図である。

【図6】図5のB部断面図である。

【図7】本発明に係る電話機のハンドセットを外した状態の一部断面図である。

【図8】本発明に係る電話機のハンドセットをハンドセット受けにかけた状態の一部断面図である。

【図9】本発明に係る電話機のハンドセットをハンドセット受けに中途半端にかけた状態の一部断面図である。

【図10】従来の電話機の断面図である。

【図11】従来の電話機の分解断面図である。

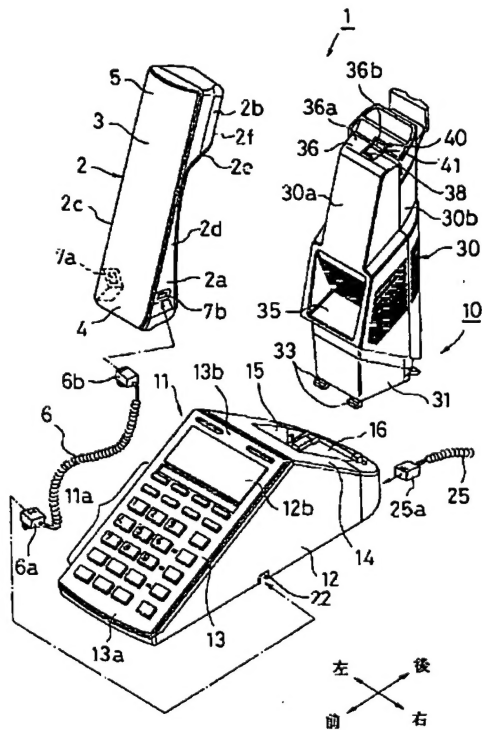
【符号の説明】

- 1 電話機
- 2 ハンドセット
- 2a 送話部
- 2b 受話部
- 2e 受話部周囲の下方顎部
- 2f 受話部周囲の下方先端面
- 30 スタンド（電話機本体）
- 30a 前面ケース（一方のケース）
- 30b 後面ケース（他方のケース）

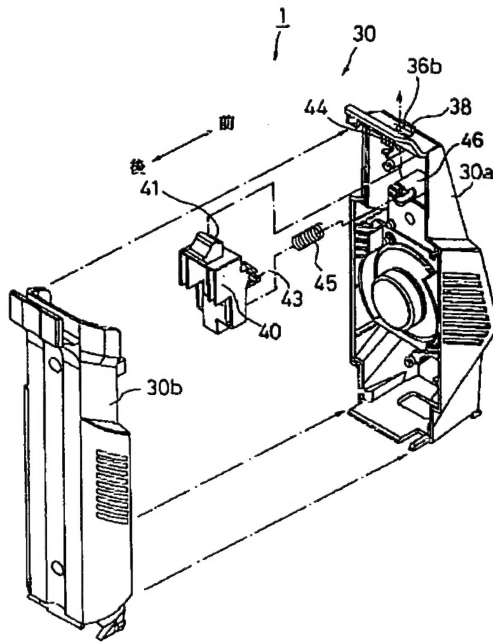
38 フック爪  
40 フックプランジャ  
41 突起部  
43 支軸  
44 係止部

44a 軸孔  
44b 挿入溝  
W1 支軸の二面幅  
W2 挿入溝の溝幅

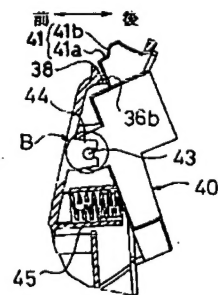
【図1】



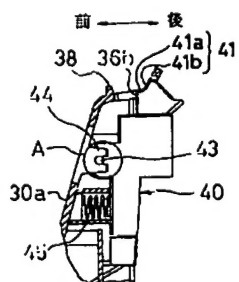
【図2】



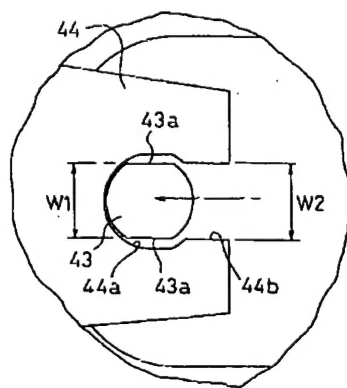
【図5】



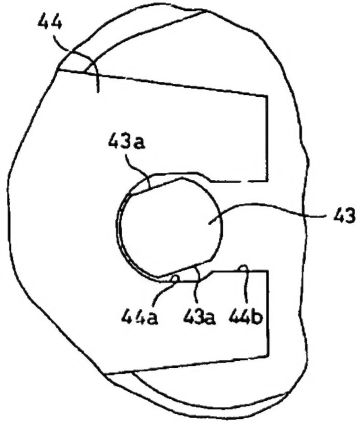
【図3】



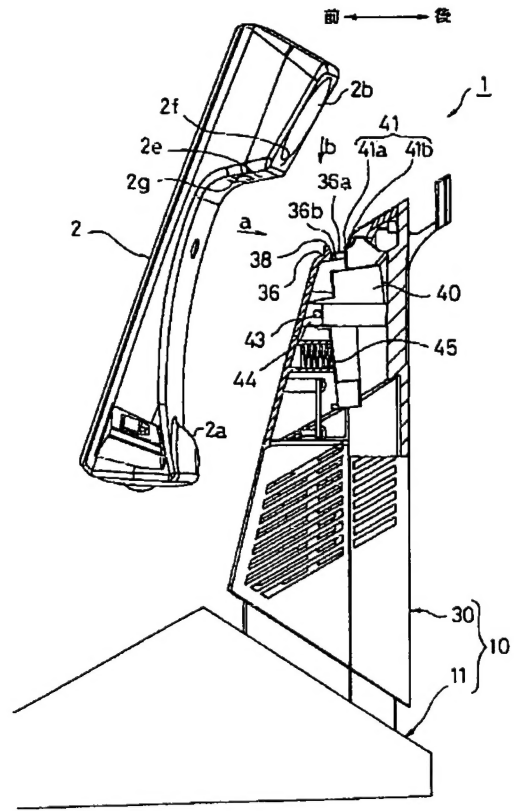
【図4】



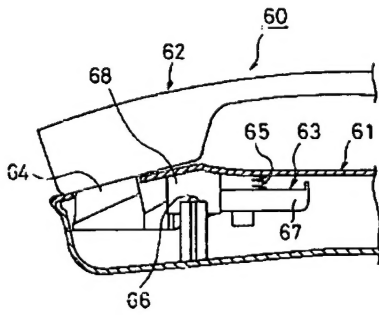
【図6】



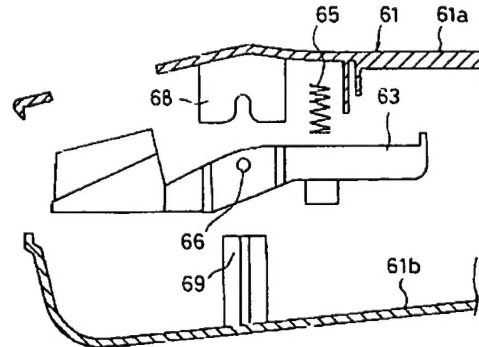
【図7】



【図10】

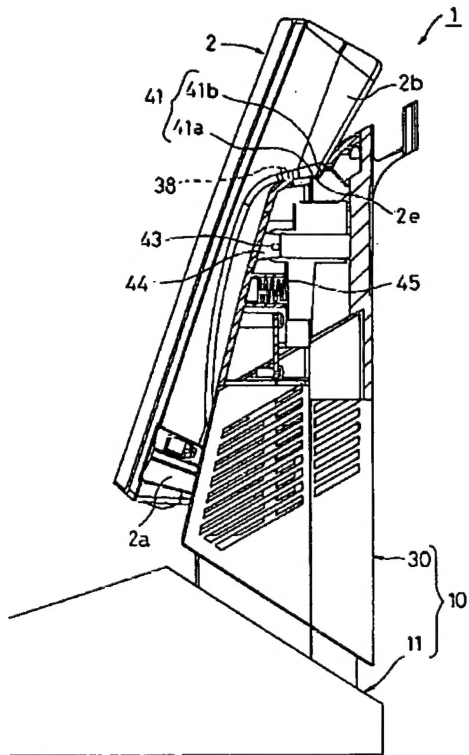


【図11】





【図8】



【図9】

